

CLAIMS

1. Internal combustion engine with at least one cylinder head, in the housing (2) of which an injector (3) is provided to inject fuel; with a wire harness for transmitting signals from an electronic controller (6) to the injector (3), where the wire harness comprises a first section (4) extending from the electronic controller (6) to the cylinder head housing (2) and a second section (5) extending from the cylinder head housing (2) to the injector (3); and with a means for connecting the first section (4) to the second section (5) of the wire harness, characterized in that the connecting means (7) comprises a terminal carrier (8) and a boot (9, 10), and in that both the terminal carrier (8) and the boot (9, 10) have means (11, 12, 15) by which they lock themselves in place.

2. Internal combustion engine with a connecting means (7) according to Claim 1, characterized in that the self-locking means of the boot (9, 10) corresponds to a latching ring (11) or a latching lobe (13).

3. Internal combustion engine with a connecting means (7) according to Claim 1, characterized in that the self-locking means of the terminal carrier (8) corresponds to a latching lobe (15).

4. Internal combustion engine with a connecting means (7) according to Claim 1 or Claim 2, characterized in that the latching ring (11) or the latching lobe (13) of the boot (9, 10) grips the terminal carrier (8) to lock the boot (9, 10) in place on the terminal carrier (8).

5. Internal combustion engine with a connecting means (7) according to Claims 1 and 3, characterized in that the latching lobe (15) of the terminal carrier (8) grips the cylinder head housing (2) to lock the terminal carrier (8) in place thereon.

6. Internal combustion engine with a connecting means (7) according to Claim 5,

characterized in that the terminal carrier (8) comprises a terminal (16) and a cover (19).

7. Internal combustion engine with a connecting means (7) according to Claim 6, characterized in that the terminal (16) comprises a compression spring (17) for exerting a clamping force and a conductor strip (18).

8. Internal combustion engine with a connecting means (7) according to one of the preceding claims, characterized in that the terminal carrier (8) has a circumferential groove (20) to accept a sealing ring.

9. Internal combustion engine with a connecting means (7) according to one of the preceding claims, characterized in that a corrugated hose (21) is provided between the first section (4) of the wire harness and the boot (9, 10).

10. Process for installing a connecting means (7) designed in accordance with Claim 1 in a cylinder head housing (2), characterized in that, in the first step (S1), the terminal carrier (8) is fixed in place on the cylinder head housing (2) by means of its self-locking mechanism; in the second step (S2), the second section (5) of the wire harness is brought into contact with the injector (3); in the third step (S3), the first section (4) of the wire harness is connected to the terminal carrier (8); and in the fourth step (S4), the boot (9, 10) is fixed in place on the terminal carrier (8) by means of its self-locking mechanism.

11. Internal combustion engine with a connecting means (7) according to Claim 10, characterized in that the second section (5) of the wire harness is permanently connected to the conductor strip (18) of the terminal carrier (8).

12. Internal combustion engine with a connecting means (7) according to Claim 10, characterized in that the first section (4) of the wire harness is detachably connected to the terminal carrier (8).

Figure 6.

